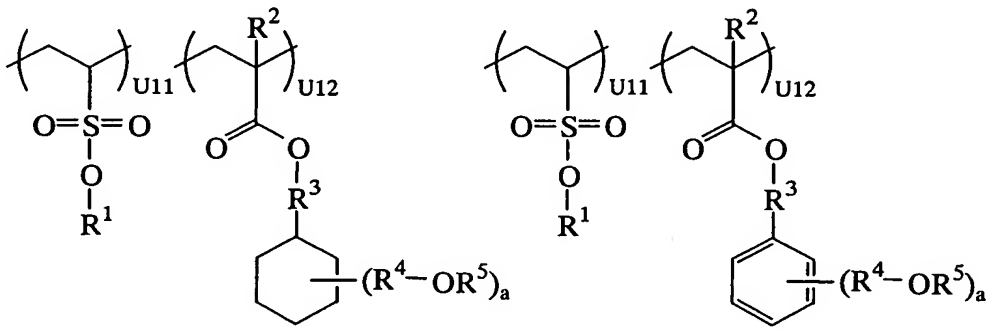
CLAIMS:

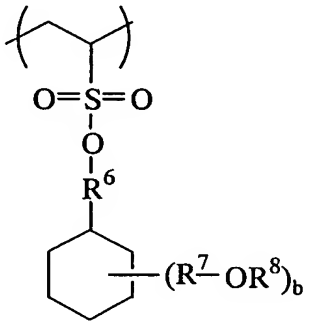
1. A polymer comprising recurring units of the following general formula (1a) or (1b) and having a weight average molecular weight of 1,000 to 500,000,



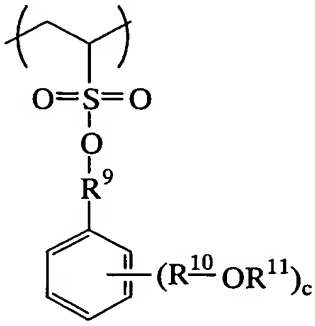
(1a) (1b)

wherein R^1 is an acid labile group, an adhesive group or a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms which may contain a hydrophilic group such as hydroxyl, R^2 is hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, R^3 and R^4 each are a single bond or a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms, R^5 is hydrogen or an acid labile group, "a" is 1 or 2, U11 and U12 are numbers satisfying $0 < U11 < 1$ and $0 < U12 < 1$.

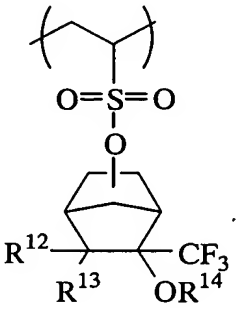
2. The polymer of claim 1 wherein the sulfonate units included in the formulae (1a) and (1b) are selected from the following general formulae (2a) to (2f):



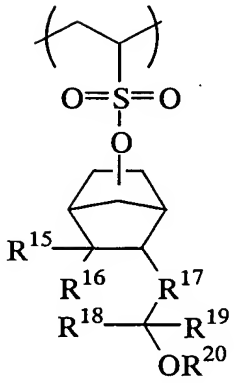
(2a)



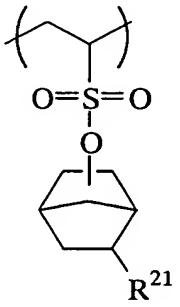
(2b)



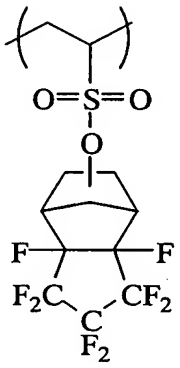
(2c)



(2d)



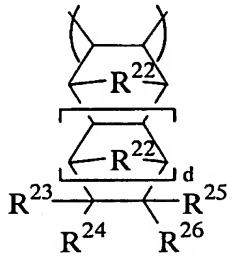
(2e)



(2f)

wherein R^6, R^7, R^9, R^{10} and R^{17} each are a single bond or a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms, R^8, R^{11}, R^{14} and R^{20} each are hydrogen or an acid labile group, R^{12}, R^{13}, R^{15}, R^{16}, R^{18} and R^{19} each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, at least one of R^{18} and R^{19} contains at least one fluorine atom, R^{21} is a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms, and each of b and c is 1 or 2.

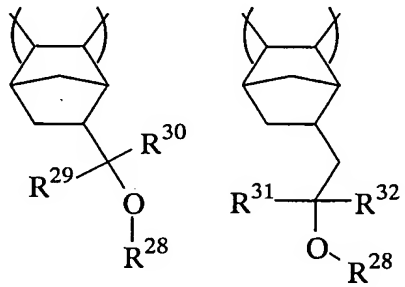
3. The polymer of claim 1, further comprising recurring units of the following general formula (3):



(3)

wherein R^{22} is a methylene group, oxygen atom or sulfur atom, R^{23} to R^{26} each are hydrogen, fluorine, $-R^{27}-OR^{28}$, $-R^{27}-CO_2R^{28}$ or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, at least one of R^{23} to R^{26} contains $-R^{27}-OR^{28}$ or $-R^{27}-CO_2R^{28}$, R^{27} is a single bond or a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms, R^{28} is hydrogen, an acid labile group, an adhesive group or a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms which may contain a hydrophilic group such as hydroxyl, and d is 0 or 1.

4. The polymer of claim 3 wherein said recurring units of formula (3) have a structure of the following general formula (3a) or (3b):

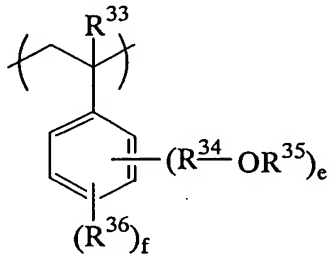


(3a) (3b)

wherein R^{28} is as defined above, R^{29} to R^{32} each are hydrogen, fluorine or an alkyl or fluorinated alkyl group of 1 to 4

carbon atoms, at least either one of R^{29} and R^{30} contains at least one fluorine atom, and at least either one of R^{31} and R^{32} contains at least one fluorine atom.

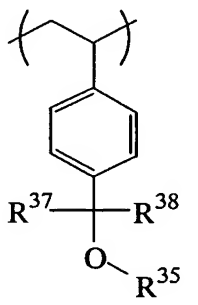
5. The polymer of claim 1, further comprising recurring units of the following general formula (4):



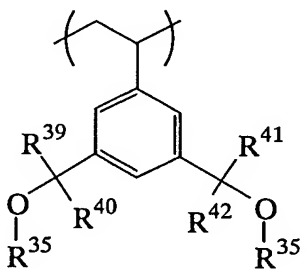
(4)

wherein R^{33} is hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, R^{34} is a single bond or a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms, R^{35} is hydrogen or an acid labile group, R^{36} is fluorine or a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms, e is 1 or 2, and f is an integer of 0 to 4, satisfying $1 \leq e+f \leq 5$.

6. The polymer of claim 5 wherein the recurring units of formula (4) have the following formula (4a) or (4b):



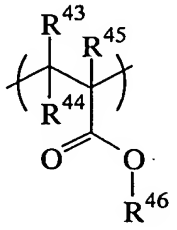
(4a)



(4b)

wherein R^{35} is as defined above, R^{37} to R^{42} each are hydrogen, fluorine or an alkyl or fluorinated alkyl group of 1 to 4 carbon atoms, at least either one of R^{37} and R^{38} contains at least one fluorine atom, at least either one of R^{39} and R^{40} contains at least one fluorine atom, and at least either one of R^{41} and R^{42} contains at least one fluorine atom.

7. The polymer of claim 1, further comprising recurring units of the following general formula (5):



(5)

wherein R^{43} to R^{45} each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, and R^{46} is hydrogen, an acid labile group, an adhesive group or a straight, branched or cyclic fluorinated alkyl group of 1 to 20 carbon atoms which may contain a hydrophilic group such as hydroxyl.

8. The polymer of claim 7 wherein R^{45} in formula (5) is trifluoromethyl.

9. A resist composition comprising the polymer of claim 1.

10. A chemically amplified positive resist composition comprising

(A) the polymer of claim 1,

(B) an organic solvent, and

(C) a photoacid generator.

11. The resist composition of claim 10, further comprising (D) a basic compound.

12. The resist composition of claim 10, further comprising (E) a dissolution inhibitor.

13. A process for forming a pattern comprising the steps of:

applying the resist composition of claim 9 onto a substrate to form a coating,

heat treating the coating and then exposing it to high-energy radiation in a wavelength band of 100 to 180 nm or 1 to 30 nm through a photomask, and

optionally heat treating the exposed coating and developing it with a developer.

14. The pattern forming process of claim 13 wherein the high-energy radiation is an F_2 laser beam, Ar_2 laser beam or soft x-ray.